

From the
INTERNATIONAL SEARCHING AUTHORITY

To:

see form PCT/ISA/220

PO 552538

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY
(PCT Rule 43bis.1)

Date of mailing
(day/month/year) see form PCT/ISA/210 (second sheet)

Applicant's or agent's file reference
see form PCT/ISA/220

FOR FURTHER ACTION
See paragraph 2 below

International application No.
PCT/L2004/000324

International filing date (day/month/year)
13.04.2004

Priority date (day/month/year)
16.04.2003

International Patent Classification (IPC) or both national classification and IPC
H04L12/64

Applicant
LEVI, David

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☒ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will usually be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA"). However, this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of three months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

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WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITYInternational application No.
PCT/IL2004/000324.**10/552538****Box No. I Basis of the opinion**

1. With regard to the **language**, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
 - ☐ This opinion has been established on the basis of a translation from the original language into the following language , which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).
2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
 - a. type of material:
 - ☐ a sequence listing
 - ☐ table(s) related to the sequence listing
 - b. format of material:
 - ☐ in written format
 - ☐ in computer readable form
 - c. time of filing/furnishing:
 - ☐ contained in the international application as filed.
 - ☐ filed together with the international application in computer readable form.
 - ☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/IL2004/000324

Box No. II Priority

1. ☒ The following document has not been furnished:

☒ copy of the earlier application whose priority has been claimed (Rule 43*bis*.1 and 66.7(a)).

☐ translation of the earlier application whose priority has been claimed (Rule 43*bis*.1 and 66.7(b)).

Consequently it has not been possible to consider the validity of the priority claim. This opinion has nevertheless been established on the assumption that the relevant date is the claimed priority date.

2. ☐ This opinion has been established as if no priority had been claimed due to the fact that the priority claim has been found invalid (Rules 43*bis*.1 and 64.1). Thus for the purposes of this opinion, the international filing date indicated above is considered to be the relevant date.

3. Additional observations, if necessary:

Box No. V Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	
	No: Claims	1-47
Inventive step (IS)	Yes: Claims	
	No: Claims	1-47
Industrial applicability (IA)	Yes: Claims	1-47
	No: Claims	

2. Citations and explanations

see separate sheet

Reference is made to the following document:

D1: US 2002/001301 A1 (PICKETT SCOTT K ET AL) 3 January 2002 (2002-01-03)

A. Citations and explanations in respect with Item V

1. Document D1 which is considered to represent the closest prior art discloses according to all features of claim 1 a network card of a rack system (see D1, page 22, paragraph 209), comprising:

- a bus interface adapted to connect to a backplane bus of the rack system (see D1, page 22, paragraph 209);
- a data interface adapted to transmit data signals through the bus interface onto the backplane bus (see D1, page 22, paragraph 209); and
- a controller adapted to periodically generate bandwidth allocation signals indicating allocation of time slots of the backplane bus, and transmitting the allocation signals through the bus interface on the backplane bus, on the same bus lines used by the data interface (see D1, page 2, paragraph 10; page 21, paragraph 205).

The subject matter of claim 1 is therefore not new (Art 33(2) PCT).

2. The subject matter of claim 17 differs from that of claim 1 in that the time slots are of variable size. Since this feature is also disclosed in D1 (see page 1, paragraph 8) the subject matter of claim 17 is also not new (Art 33(2) PCT).
3. The subject matter of claim 23 differs from that of claim 1 in that the control signals are being timed responsive to the bandwidth of the network bus, such that the signals received by the data interface can be forwarded onto the network immediately upon receipt without queuing. Since this feature is also disclosed in D1 (see page 1, paragraph 8) the subject matter of claim 23 is also not new (Art 33(2) PCT).
4. The subject matter of claim 27 differs from that of claim 1 in that it comprises a

memory unit for buffering data signals and an input interface adapted to receive control signals which relate to the order in which signals are to be extracted from the memory unit, from a unit external to the line card. Since this features are also disclosed in D1 (see page 26, paragraphs 243-244) the subject matter of claim 27 is also not new (Art 33(2) PCT).

5. Document D1 which is considered to represent the closest prior art discloses according to all features of claim 33 a rack system (see D1, page 22, paragraph 209), comprising:
- a backplane bus (see D1, page 22, paragraph 209);
 - at least one line card, connected to the backplane bus, which includes a memory unit for queuing data signals (see D1, page 22, paragraph 209); and
 - a network card, connected to the backplane bus, which controls the order in which signals are transmitted from the memory unit over the backplane bus (see D1, page 22, paragraph 209).

The subject matter of claim 33 is therefore not new (Art 33(2) PCT).

6. Document D1 which is considered to represent the closest prior art discloses according to all features of claim 35 a method of transmitting signals on a backplane bus (see D1, page 22, paragraph 209), comprising the steps of:
- receiving signals in a plurality of formats, by a first line card connected to the backplane bus (see D1, page 2, paragraph 8);
 - encapsulating at least some of the signals into a format allowing large packets of a size above 500 bytes, by the first card (see D1, page 2, paragraph 8);
 - transmitting the encapsulated signals to a second card connected to the backplane bus (see D1, page 22, paragraph 209); and
 - removing the encapsulation from at least some of the encapsulated signals, by the second card (see D1, page 2, paragraph 8).

The subject matter of claim 35 is therefore not new (Art 33(2) PCT).

7. Document D1 which is considered to represent the closest prior art discloses according to all features of claim 42 a method of upgrading a rack system (see D1, page 5, paragraph 68), comprising the steps of:
- providing a rack system including at least one network card and at least one line card, which operate in accordance to a single signal format (see D1, page 5, paragraph 68);
 - replacing the network card with a network card that supports operation in accordance with a plurality of formats (see D1, page 5, paragraph 68); and
 - adding one or more line cards which operate in accordance with a method allowing transmission in accordance with a plurality of formats, while leaving in the rack system one or more of the at least one single format line card (see D1, page 5, paragraph 68).

The subject matter of claim 42 is therefore not new (Art 33(2) PCT).

8. Claim 45 relates to a method comprising method features corresponding to the apparatus features defined by claim 1. The above objections with respect to claim 1 are thus applicable mutatis mutandis to this claim. Therefore, the subject matter of claim 45 is also not new (Art 33(2) PCT).
9. Dependent claims 2-16, 18-22, 24-26, 28-32, 34, 36-41, 43-44, and 46-47 do not appear to contain any additional features which, in combination with the features of any claim to which they refer, are novel for the reason that the subject matter of said claims is disclosed in document D1 (see in particular figures 3, 5, 8, and 16; page 1, paragraph 8; page 2, paragraphs 10, 16, and 25; page 5, paragraph 68; page 6, paragraphs 73, 74, and 81; page 18, paragraph 163; page 21, paragraph 205; page 22, paragraph 209; page 26, paragraphs 243 and 244).

The subject matter of dependent claims 2-16, 18-22, 24-26, 28-32, 34, 36-41, 43-44, and 46-47 therefore is not new, Article 33(2) PCT.

B. Further remarks made in respect of the present application

1. Although claims 1, 17, 23, and 27 on one hand and claims 35, 42, and 45 on the other hand have been drafted as separate independent claims, they appear to relate effectively to the same subject matter, respectively, and to differ from each other, respectively, only with regard to the definition of the subject matter for which protection is sought. The aforementioned claims, respectively, therefore lack conciseness and as such do not meet the requirements of Art 6 PCT.
2. Claim 34 is not clear (Art 6 PCT) since it defines the subject matter for which protection is sought by a negative feature: "the network card does not include an uplink buffer". This disclaimer, however, is not necessary in the present case, since the feature could be also described in a positive manner: the network card includes only a downlink buffer. Therefore, in order to comply to Art 6 PCT, the subject matter should be described by the positive feature.
3. The applicant's attention is drawn to the following matters, which should as well be considered:
 - 3.1 To meet the requirements of Rule 5.1(a)(ii) PCT, the relevant background art disclosed in document D1 should be acknowledged in the description.
 - 3.2 The opening part of the description should be brought into conformity with the wording of any new or amended independent claim, Rule 5.1(a)(iii) PCT.
 - 3.3 To meet the requirements of Rule 6.3(b) PCT, any independent claim should be correctly cast in the two-part form, with those features which in combination are part of the nearest prior art being placed in the preamble.
 - 3.4 Reference signs in parentheses should be inserted in all claims to increase their intelligibility, Rule 6.2(b) PCT. This applies both to the preamble and to the characterizing portion.
4. The attention of the applicant is drawn to the fact that the application may not be amended in such a way that it contains subject matter which extends beyond the content of the application as filed, Art 34(2)(b) PCT.

In his letter of reply, the applicant should indicate the parts of the originally filed application serving as a basis for subject matter newly introduced into the claims.

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING
AUTHORITY (SEPARATE SHEET)**

International application No.

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5. The applicant is requested to file amendments by way of replacement pages in accordance with Rule 66.8 PCT.